AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): Method for coating an object (40) to be coated with a meltable coating material comprising the steps:

- production of a flame (44) having a maximum flame speed and a flame direction (F) which coincides with a flame axis (Y-Y) and which is directed towards the object (40) to be coated;

- introduction of a quantity of the meltable coating material into the flame (44);

- the maximum flame speed and the distance between the object (40) to be coated and the flame (44) being selected so that the meltable coating material is projected onto the object (40) to be coated and so that at least a portion of the quantity of the meltable coating material is in the molten state at the time of impact on the object (40) to be coated,

wherein~~characterised in that~~ the quantity of meltable coating material comprises powder constituted by particles,~~ and~~

~~in that~~ the flame (44) has a temperature which is sufficiently low for the particles, of the powder not to be completely evaporated and which is sufficiently high for the particles of the powder to be at least partially melted, and

~~wherein~~ the powder consists of~~comprises~~ an alloy which is~~comprises~~ at least 50% by weight of Zn and a residual portion of the alloy comprises aluminium, wherein at least a portion of the powder is a waste product powder originating from a method of coating by projection.

2. (previously presented): Coating method according to claim 1, characterised in that the quantity of material consists of powder.

3. (previously presented): Coating method according to claim 1 , characterised in that the particles have a maximum dimension of less than 1000μm, preferably less than 800μm and in particular less than 500μm.

4. (previously presented): Coating method according to claim 1, characterised in that the particles have a minimum dimension of greater than 20μm, preferably greater than 40μm and in particular greater than 60μm.

5. (previously presented): Coating method according to claim 1, characterised in that the material is introduced into the flame (44) in at least one introduction direction (IA to ID), and in that the introduction direction (IA to ID) comprises a radial component relative to the flame axis (Y-Y).

6. (original): Coating method according to claim 5, characterised in that the introduction direction (IA to ID) is directed substantially radially relative to the flame axis (Y-Y).

7. (previously presented): Coating method according to claim 5 , characterised in that the object 40 to be coated extends along a longitudinal axis (X-X), and in that the introduction direction (IA to ID) has a component which extends in parallel with the longitudinal axis (X-X).

8. (original): Coating method according to claim 7, characterised in that the introduction direction (IC, ID) extends substantially in parallel with the longitudinal axis (X-X) of the object (40) to be coated.

9. (previously presented): Coating method according to claim 7 , characterised in that the material is introduced into the flame (44) in at least two introduction directions (IA, IB; IC, ID), and in that these two directions extend symmetrically at one side and the other of a plane (P-P)

which comprises the flame axis (Y-Y) and which extends perpendicularly to the longitudinal axis (X-X) of the object to be coated.

10. (currently amended): Coating method according to claim 1, characterised in that the powder ~~comprises~~ consists of at least 50% by weight of a metal or an alloy whose melting point is between 400°C and 500°C, preferably between 425°C and 475°C.

11. (currently amended): Coating method according to claim 10, characterised in that the powder is ~~constituted by~~consists of an alloy comprising at least 85% by weight of Zn and preferably at least 95% by weight of Zn.

12. (previously presented): Coating method according to claim 11, characterised in that the residual portion of the alloy consists of aluminium.

13. (previously presented): Coating method according to claim 1, characterised in that the maximum flame speed is between 500m/s and 2000m/s, and is preferably between 700m/s and 900m/s.

14. (canceled).

15. (previously presented): Coating method according to claim 1, characterised in that the waste product powder originates from an arc wire coating method using a wire or a cord of meltable coating material as the source material.

16. (previously presented): Coating method according to claim 1, characterised in that that a portion of the powder is obtained by sieving a quantity of unprocessed waste product powder.

17. (original): Coating method according to claim 16, characterised in that at least that portion of the powder is subjected to a drying or deoxidation operation before being introduced into the flame (44).

18. (previously presented): Coating method according to claim 1, characterised in that the maximum temperature of the flame is between 2000°C and 3000°C, preferably between 2250°C and 2750°C and in particular between 2400°C and 2600°C.

19. (currently amended): Device for coating by means of a flame, suitable for carrying out the method according to claim 1, of the type comprising:

- a burner (42) which can be connected to a source of combustible gas (62) and which can produce a flame (44) in a flame axis (Y-Y),

- means (46) for introducing a meltable coating material into the flame,

wherein~~characterised in that~~ the means (46) for introducing the meltable coating material are suitable for introducing the meltable coating material into the flame (44) in the form of powder,

- a supply reservoir (8A, 8B, 8C) containing powder which is at least partially a waste produce originating from a method of coating by projection, and

- means (18) for supplying the powder from the supply reservoir (8A, 8B, 8C) to the introduction means (46).

wherein the powder consists of~~comprises~~ an alloy which is~~comprises~~ at least 50% by weight of Zn and a residual portion of the alloy comprises aluminium~~, wherein at least a portion of the powder is a waste product powder originating from a method of coating by projection~~.

20. (original): Device according to claim 19, characterised in that the introduction means (46) comprise an injector (120A, 120B, 120C, 120D) which can introduce a mixture of coating material powder/conveying gas into the flame (44) in an introduction direction (IA, IB, IC, ID).

21. (original): Device according to claim 20, characterised in that the introduction direction (IA, IB, IC, ID) is directed substantially radially relative to the flame axis (Y-Y).

22. (previously presented): Device according to claim 19, characterised in that it further comprises a mixer (126) for the coating material powder/conveying gas comprising a powder inlet (128), a conveying gas inlet (130) which can be connected to a conveying gas source (132) and an outlet for the mixture of coating material powder/conveying gas, in that the mixer (126) can mix the powder with a flow of conveying gas and in that the outlet for the mixture of coating material powder/conveying gas is connected to at least one injector (120A, 120B, 120C, 120D).